

CHASSIS AND BODY SPECIFICATIONS

Motor Stephens overhead valve, 6 cylinder. $3\frac{1}{4}$ inch bore, $4\frac{1}{2}$ -inch stroke. Developing 59 horse-power at 2750 revolutions per minute, its intake manifold is entirely inside the cylinder head and forms a superheating and tempering gas chamber of revolutionary efficiency. Grilled by the exhaust from all six cylinders, this manifold "cracks" every heavy particle of gasoline and turns it into high-power gas radiant with explosive force. A water-jacket holds the gas at a temperature range and density where maximum power, instant acceleration and unflinching economy meet and satisfy every demand you can make on a motor car.

Crankshaft Large, $2\frac{1}{4}$ -inch, balanced statically and dynamically. Connecting rods heat-treated. 1-inch hardened steel piston pins. Light, close-grained iron pistons with piston rings hand fitted. Alloy steel valves, $1\frac{1}{2}$ inch opening, $\frac{3}{8}$ inch lift. Dual valve springs. Quiet valve rocker-arms, ball and socket bearings individually ground to fit. Crankshaft and connecting rod bearings are hand fitted and scraped in.

Cylinders Piston fits are accurate within three ten-thousandths of an inch. Such care and precision in construction is not excelled in the highest-priced cars of foreign or American make. Forced feed lubrication to all motor bearings, automatic vacuum control, synchronized with motor load.

Ignition Delco starting, lighting, ignition; semi-automatic spark control. Extra size storage battery, 113 ampere-hour capacity.

Fedders thin-core radiator. Oakes ball bearing fan. Thermosiphon cooling. Stewart vacuum fuel system. Stromberg carburetor. Exhaust heated air intake.

Clutch 10-inch Borg & Beck dry plate, adjustable. Throw-out bearing positively lubricated. Large clutch brake. Clutch pedal adjustable. Requires little effort to release. Unusually smooth in operation.

Transmission Stephens-Special. SAE standard gear-shift. New Departure ball bearings on drive shaft. Nickel steel gears. Universal Joints. Silent bearing type, oil lubricated. Enclosed in oil-tight, dust-tight and water-tight, oil-retaining housings.

Rear Axle Oversize Stephens-Timken. Quiet, spiral-bevel drive. Timken roller bearings, adjustable. Oil-tight housing. 5.5 to 1 reduction on Numbers 24, 26 and 27. 5.09 to 1 reduction on Numbers 15 and 18. 4.66 to 1 reduction on Numbers 12 and 16.

Front Axle Stephens-Timken. Extra size for super strength. Timken roller bearings, adjustable. Oil lubricated steering yoke bearings.

Steering Gear Oversize Stephens - Gemmer semi-reversible worm and gear type, 9.5 to 1 reduction. 18-inch walnut wheel. Ball bearings reduce steering effort to a minimum. Spark and throttle controls on Numbers 24, 26 and 27 are latest lever type.

Wheelbase 124 inch on Numbers 24, 26 and 27. 117 inch on Numbers 12, 15, 16 and 18.

Frame Rigid type. Hydraulic-pressed steel, straight side rails: 7-inch channel section on Numbers 24, 26 and 27, 6-inch channel section on Numbers 12, 15, 16 and 18. Five rigid cross members. Torsion tubes 2 inches in diameter at both front and rear. This rigid frame construction eliminates body weaving, squeaks and noises.

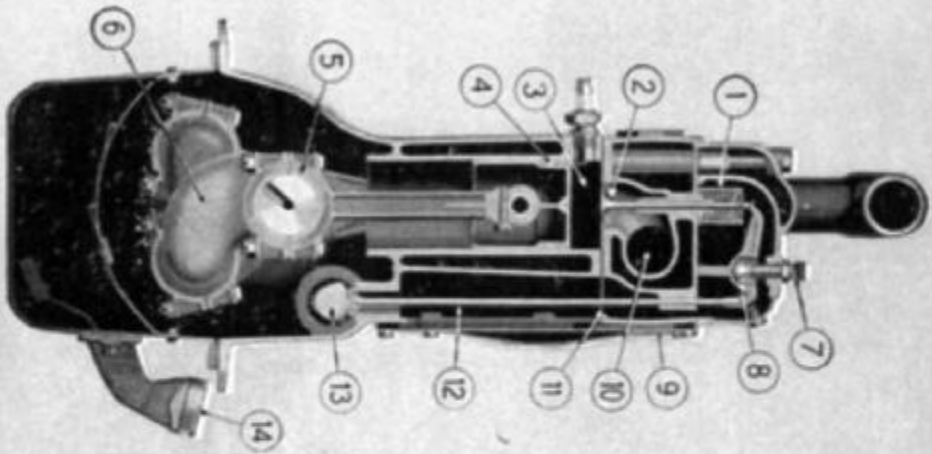
Springs Mather chrome-vanadium throughout. Long-lived and flexible, unusual length for riding comfort. Action of front and rear springs harmonized to absorb road shocks. $57\frac{1}{2} \times 2\frac{1}{4}$ inch rear, $37\frac{1}{2} \times 2$ inch front on Numbers 24, 26 and 27. 56×2 inch rear, $37\frac{1}{2} \times 2$ inch front on Numbers 12, 15, 16 and 18.

Brakes Emergency brake $8 \times 2\frac{1}{2}$ inches at the rear of the transmission. Service brakes on rear wheels— $15\frac{1}{2}$ inch drums, oil-less brake mechanism lubrication. Stephens brake drums are turned true after being mounted on the wheels. This precautionary measure is assurance against eccentric brake drums—the cause of uneven braking and consequent skidding.

Tires Oversize non-skid cords on all wheels, $33 \times 4\frac{1}{2}$ inches on Numbers 24, 26 and 27; 32×4 inches on Numbers 12, 15, 16 and 18. Stanweld demountable rims.

Body Stephens bodies are constructed and finished of the same materials and by the same hand methods which custom body-builders use. The substantial frame is of straight-grain hard wood, air-seasoned before it enters the drying kilns. Every part is cut to form; nothing is steamed or bent. Joints are screwed and glued. Body panels are hand-shaped and individually fitted—as also are all doors. Stephens quiet comfort lasts as long as the marvelous Stephens chassis itself.

Equipment Transmission lock, Kellogg power-driven tire pump, Stewart 75-mile-per-hour speedometer, cowl ventilator, electric horn, stop light, monogram headlight lenses and large barrel-type headlights, Saal high-pressure chassis oiling system and special additional equipment on the sport and enclosed models. Such completeness of equipment is entirely in harmony with the high-class design and construction hidden under the hood and behind the body panels.



The Stephens engine is of the perfected overhead-valve type, which is generally recognized as giving from 15 to 20 per cent more power than other types of engines. Although theoretically rated at 25.3 horse power, it actually develops 57.

Distinctive points of merit that insure Salient performance:

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| 1—Double valve springs; insuring quiet, quick action. | 8—Complete enclosure of all valve-operating parts. Dust-proof — working in oil. Noiseless. |
| 2—Large valves, one-half the diameter of the combustion chamber. | 9—Removable plate for inspection of all valve-working parts. |
| 3—Compact combustion chamber. The full force of the explosion acts upon the piston head. | 10—Intake manifold within the cylinder head—constantly maintained at proper heat by exhaust from cylinder. |
| 4—Large piston bearing surface between second and third rings; steadier action and longer life of the piston and cylinder. | 11—Detachable cylinder head, affording accessibility to all parts of engine. |
| 5—Large bearings. Long-lived and rarely in need of adjustment. | 12—Short, direct-acting push rods. Enclosed and noiseless. |
| 6—Balanced crank shaft; no vibration, increased power and less wear. | 13—Mushroom type cams; raise and lower push rods with even pressure without knock or thump. Quiet and long-lived. |
| 7—Valves adjusted by simple turn of screw-driver while the engine is running. | 14—Dial float tells the amount of oil in case. Capacity, 2-1/4 gallons of oil. |